IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS WACO DIVISION

SABLE NETWORKS, INC. AND SABLE IP, LLC, **Plaintiffs,** **v.** **RIVERBED TECHNOLOGY, INC.,** **Defendant.**	**Civil Action No. 6:21-cv-00175-ADA** **JURY TRIAL DEMANDED**
Sable Networks, Inc. and Sable IP, LLC, **Plaintiffs,** **v.** **Cloudflare, Inc.,** **Defendant.**	**Civil Action No. 6:21-cv-00261-ADA** **JURY TRIAL DEMANDED**

CLOUDFLARE, INC'S OPENING CLAIM CONSTRUCTION BRIEF

CHARHON CALLAHAN
ROBSON & GARZA, PLLC

STEVEN CALLAHAN
CHRISTOPHER T. BOVENKAMP
ANTHONY M. GARZA
C. LUKE NELSON
JOHN HEUTON

Counsel for Defendant Cloudflare, Inc.

TABLE OF CONTENTS

INTRODUCTION

Sable Networks asserts a series of patents that grow out of its predecessor Caspian Network's efforts to improve existing quality of service (QoS) and "flow-based" router technology. Complaint (Dkt. 1) ¶¶ 5-8. According to Sable, Caspian's founder, Larry Roberts, sought to "buil[d] flow-based routers that advanced quality of service and load balancing performance." *See id.* Caspian's patents state that its flow-based routers provide "a previously unavailable degree of quality of service." *See, e.g.*, '431 patent at Abstract. Nonetheless, Caspian's router, the Apeiro, was unsuccessful in the marketplace and by 2008, Caspian sold its assets to Sable Networks. Complaint ¶¶ 6-9.

Sable now asserts patents related to its approaches to QoS and flow-based router technology against companies like Cloudflare that do not manufacture routers and use very different techniques and products in their networks. To do so, Sable stretches the asserted claims well beyond the scope of the technology it purports to have invented including flip-flopping on the meaning of terms from one litigation or proceeding to the next. Accordingly, Cloudflare respectfully requests that the Court reject Sable's proposals and instead adopt Cloudflare's proposed constructions, which match the alleged inventions described in Sable's patents.

BACKGROUND

I. The Asserted Patents and Related Proceedings

A. U.S. Patent No. 6,954,431 (the "'431 patent") (Exhibit 1[1])

The '431 patent, entitled "Micro-Flow Management," describes one aspect of Caspian's flow-based routing technology. It is directed to providing the ability to give quality of service (QoS) guarantees for data transmissions through the use of "microflows" and "QoS associated

[1] All numbered exhibits hereto are attached to the Declaration of C. Luke Nelson.

with each microflow that is characterized by a set of descriptors." *See* '431 patent at Abstract. "These descriptors are communicated to each switch by the first packet of the micro-flow associated with the descriptors." *Id.* The claims of the '431 patent do not match its specification, and Cloudflare has moved to invalidate the '431 patent based on its lack of written description.

B. U.S. Patent 6,977,932 (the "'932 patent") (Exhibit 2)

The '932 patent is directed to solving QoS-related problems in conventional MPLS networks and describes "network tunneling . . . utilizing flow state information." *See* '932 patent at Abstract. The '932 patent further describes "an aggregate flow block that includes tunnel specific information for the selected network tunnel" and "the aggregate flow block further include[ing]statistics for the selected network tunnel." *Id.*

C. U.S. Patent No. 7,012,919 (the "'919 patent") (Exhibit 3)

The '919 patent, which is related to and builds on the concepts described in the '431 Patent,[2] describes another aspect of Caspian's flow-based routing technology—aggregating microflows using "intelligent load balancing" in MPLS networks. *See* '919 patent at Abstract. More specifically, the '919 Patent describes a method of routing micro-flows among "a set of label switched paths (LSPs) [that] is defined for a [MPLS] network domain." *See id.*

D. U.S. Patent 8,243,593 (the "'593 patent") (Exhibit 4)

The '593 Patent describes a Caspian solution to a problem of its time—the "advent of file sharing applications such as KaZaA, Gnutella, BearShare, and Winny" and peer-to-peer (P2P) traffic. *See* '593 patent at 1:7-10. Because P2P protocols were increasing in sophistication, the

[2] Both the '919 Patent and the '431 Patent claim priority to Application No. 09/552,278 (the "'278 application"), which issued as U.S. Pat. No. 6,574,195 (the "'195 Patent"). The '919 patent issued from a continuation-in-part of the '278 application, which added new subject matter and four additional named co-inventors.

inventor of the '593 patent wanted to find a way to identify P2P traffic such that it could be effectively controlled. *See id*. at 1:46-49. Attempting to take advantage of indefinite language in the asserted claims, Sable is stretching the '593 patent to cover systems unrelated to the identification and control of P2P traffic.

E. Related Proceedings: IPRs and the *Cisco* Action.

Cloudflare has filed petitions for *Inter Partes* Review of each of the asserted patents. Sable has filed a Patent Owner's Preliminary Response ("POPR") to each, in which Sable has taken claim-construction positions that are pertinent to—and in some instances in contradiction with—the claim constructions Sable is proposing to the Court. Cloudflare's IPR petitions and Sable's POPRs will be referred to here as, *e.g.*, "'431 IPR" and "'431 POPR."

Additionally, in a previous litigation before this Court in which Sable asserted the '431, '932, and '919 patents against Cisco Systems, Inc. (action no. 6:20-cv-00288-ADA; the "*Cisco*" action), Sable similarly adopted certain claim-construction positions and agreements that are pertinent to and in contradiction with the positions Sable now asserts to this Court. Sable's Opening Claim Construction Brief (which includes a section reciting Sable's agreed constructions of various terms) is attached as Exhibit 5 and will be referred to as "Sable *Cisco* Brief."

AGREED CONSTRUCTIONS

The parties have agreed to constructions for certain claim terms, which are set forth in the attached Exhibit 6.

ARGUMENT

II. The '431 Patent

1. Preamble (19) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Claim 19's preamble is limiting	Claim 19's preamble is not limiting

The dispute between the parties is whether Claim 19's preamble is limiting (as proposed by Cloudflare) or not (as proposed by Sable). Sable's position in this case is a flip of a position it agreed to in previous litigation involving the same patent where it agreed Claim 19's preamble was limiting. *See* Sable *Cisco* Brief at 18. Sable now takes the contrary position. Not only is this new position inconsistent with Sable's past representations, it is wrong. Claim 19 provides:

> 19. In a network management system for controlling data traffic through **a network**, the data traffic comprised of **a plurality of microflows**, a microflow classification structure to determine data traffic type comprising:
>
> a packet discard time substructure configured to provide a time value to ensure buffer capacity for a microflow;
>
> a weighting factor substructure configured to partition available bandwidth among **the plurality of microflows** to be transmitted through **the network**; and
>
> a delay variation substructure configured to provide a buffer value to dampen jitter in a transmission of the microflow.

'431 patent at claim 19 (bold and underlined emphasis added).

The preamble here is limiting, because it recites essential structure and is necessary to give life, meaning, and vitality to the claim. *See Shoes by Firebug LLC v. Stride Rite Children's Group, LLC*, 962 F.3d 1362, 1367 (Fed. Cir. 2020) (quoting *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002)). The preamble terms "a network" and "a plurality of microflows" are plainly the antecedent bases for the claim terms "the network" and "the plurality

of microflows" in the body of the claim. *See* bolded claim language, *supra*. "[W]hen the preamble is essential to understand limitations or terms in the claim body, the preamble limits claim scope." *Catalina Mktg.*, 289 F.3d at 808; *accord Shoes by Firebug*, 962 F.3d at 1368.

Furthermore, the body of the claim recites three "substructure[s]"—these cannot sensibly be considered outside of the meaning and context of the overall "microflow classification structure" specified by the preamble. That is to say, there needs to be an antecedent "structure"—the "microflow classification structure"—in order to understand the structural limitations of the "substructure"—*i.e.*, the "packet discard time substructure," "weighting factor substructure," and "delay variation substructure" recited in the body of the claim.

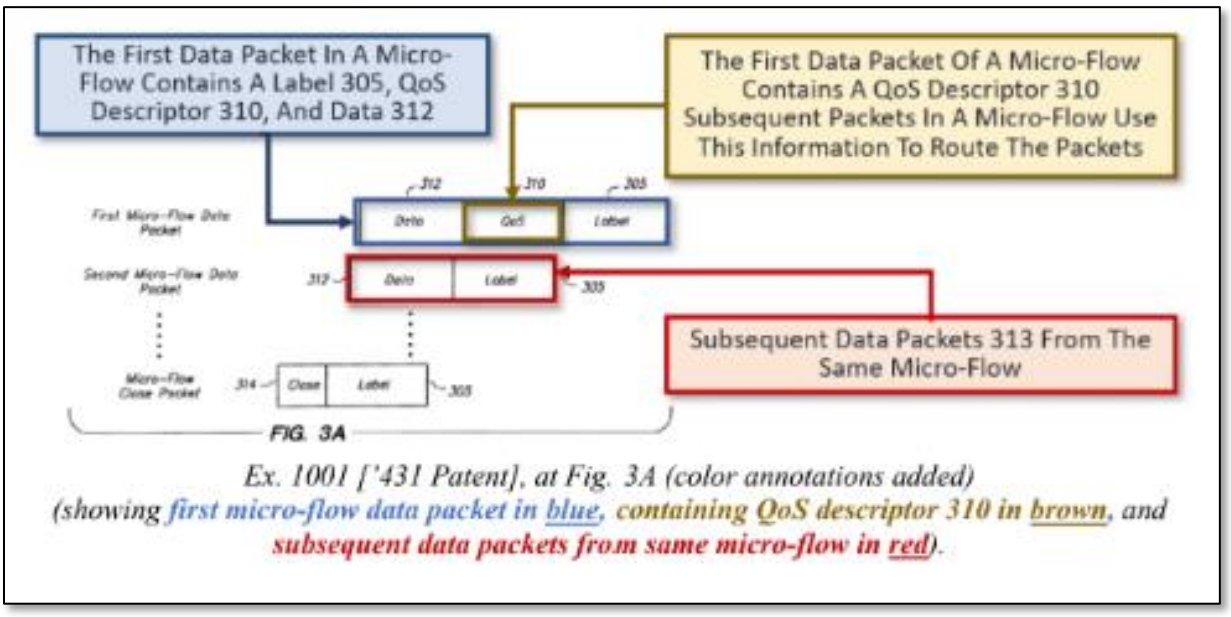
The preamble of claim 19 therefore is essential to and limits the body of the claim.

2. Microflow (1, 10, 11, 16, 18-29) [Sable Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Plain and ordinary meaning	Uniquely identifiable set of data signals that typically have the same open system interconnection model network layer and transport layer characteristics

There is a dispute between the parties as to the scope of the term "microflow," made more difficult by Sable's inconsistent, potentially prejudicial treatment of the term. The term "microflow" occurs in three of the patents at issue in this case. Each of these patents was previously asserted including against Cisco. In the *Cisco* action, Sable and Cisco agreed to construe "microflow" to mean a "uniquely identifiable set of data signals that typically have the same open system interconnection model network layer and transport layer characteristics." Sable *Cisco* Brief at 18. Sable proposes the same construction here. Cloudflare relied on this same construction in the IPR it filed against the '431 patent. Ex. 7, '431 IPR at 14.

But Sable departed from the *Cisco* agreed construction (and the construction it proposes here) in each of its Preliminary Patent Owner Responses to the respective Cloudflare IPRs. In its '431 POPR, for example, Sable defined "microflow" as "a group of data packets from a single transmission wherein each data packet in the microflow includes the same source address, destination address, source port, destination port, and protocol type, *and is assigned a quality of service (QoS) value*." Ex. 8, '431 POPR at 1-2 (emphasis added). Sable used the following diagram to illustrate a microflow.



Ex. 1001 ['431 Patent], at Fig. 3A (color annotations added) (showing first micro-flow data packet in blue, containing QoS descriptor 310 in brown, and subsequent data packets from same micro-flow in red).

'431 POPR at 15. Sable emphasized the fact that "[t]he first micro-flow data packet includes a label field **305**, a **QoS field 310** and a data field **312**." '431 POPR at 16 (citing '431 patent at 8:17-21) (Sable's emphasis). Sable then argued that the Petitioner failed to show the presence of a "microflow" in the prior art: "It is therefore not surprising that Petitioner provides no evidence, and fails to explain, why a stream of data packets in ATM networks is the same as an individual micro-flow—a set of data packets sharing the same source address, destination address, source port, destination port, and protocol type *wherein the first data packet contains QoS descriptors*

that describe QoS constraints for the micro-flow." '431 POPR at 18 (emphasis added). Sable urged similar "microflow" definitions in its POPR filings for two other patents-in-suit: the '919 patent and the '932 patent. Ex. 9, '919 POPR at 1-2, 14, 15; Ex. 10, '932 POPR at 9, 14-15, 24-25 (including arguments based on disclosure in the '278 application—*i.e.*, the substance of the '431 patent's specification).

Sable should be held to the positions it took and relied upon in each of the currently pending IPRs. For the related (albeit not identical) '431 Patent and '919 Patent, Sable defined "microflow" in almost identical manners.

"Microflow," '431 Patent	Under the plain meaning of the term "microflow," confirmed by the patent specification, the claimed "microflow" includes *a group of data packets from a single transmission wherein each data packet in the micro-flow includes the same source address, destination address, source port, destination port, and protocol type, and is assigned a quality of service (QoS) value.* '431 POPR at 1-2.
"Micro-flow," '919 Patent	The plain meaning of this claim language, as supported by the patent specification, requires that the claimed "plurality of individual micro-flows" comprises individual micro-flows consisting of *a group of data packets from a single transmission wherein each data packet in an individual micro-flow includes the same source address, destination address, source port, destination port, and protocol type, and is assigned a quality of service (QoS) value.* '919 POPR at 1-2.

Sable's proposed construction in this case is clearly different. For example, Sable's proposed construction of "microflow" in this case does not require the inclusion of any QoS information. In contrast, both POPR-proposed constructions of Sable specifically include QoS information. '431 POPR at 1-2; '919 POPR at 1-2. Given the alignment of the claim construction standards in district court cases and IPR proceedings, there is no legitimate reason for Sable's

different proposed constructions. Sable should not be allowed to put forth a different construction here than offered in its POPRs.

3. Based on a characteristic (1, 10) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Based on a characteristic associated with the microflow	Term does not require construction; plain and ordinary meaning

The dispute between the parties is whether the claim term "based on a characteristic" should be construed to clarify what characteristic is being referred to in the claim. This term is another example of Sable back-tracking on a previously taken position. In the *Cisco* action, Sable agreed to essentially the same construction now being proposed by Cloudflare: "based on a characteristic associated with a microflow." Sable *Cisco* Brief at 21. Cloudflare proposed a tweak of that agreed construction (changing the "characteristic associated with a" to a "characteristic associated with the") to better conform to the language of the claim.

Claim 1 (the disclaimed basis for dependent claim 8) and claim 10 each recite the limitation "determining a capacity of a buffer containing a microflow based on a characteristic." '431 patent at claims 1, 10. The claim language begs the question: "based on a characteristic" of what? Cloudflare proposes, in context of the claim language, that the limitation means "determining a capacity of a buffer containing a microflow based on a characteristic associated with the microflow."

Construction is needed because Sable has taken two *different* positions already as to the meaning. As noted above, originally, in the *Cisco* action, Sable agreed to a somewhat similar construction, "determining a capacity of a buffer containing a microflow based on a characteristic associated with *a* microflow." Sable *Cisco* Brief at 21 (emphasis added). But the *Cisco* construction leaves open the possibility that this claim limitation could in essence be read as

including "determining a capacity of a buffer containing a microflow based on a characteristic associated with any microflow anywhere." This would not make sense given the claim language.

Sable is now unwilling to construe the term at all—meaning that Sable is unwilling for "characteristic" to be limited even to a characteristic of *a microflow, somewhere*. Sable is in essence asking for the construction to include such breadth as "determining a capacity of a buffer containing a microflow based on a characteristic of anything at all." There is no basis for such a construction.[3]

4. Packet discard time (8, 17, 19-22, 24) [Sable Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Plain and ordinary meaning	a value used to ensure buffer availability within the switch

The dispute between the parties is whether "packet discard time" should mean a "packet discard time"—as is well understood by a POSA—or should be re-defined to encompass, *e.g.*, a generic "value" rather than a time. The term "packet discard time" is yet another example of a term in which Sable has taken two different positions. In the *Cisco* action, Sable agreed that "packet discard time" meant a "*time* value that ensures buffer availability within the switch." Sable *Cisco* Brief at 18. But in this action, Sable proposes "a value used to ensure buffer availability within the switch"—*i.e.*, dropping "time" from the construction. Sable is obviously attempting to broaden the scope of the "packet discard time" term such that it is not limited to a "time." There is simply no basis to do so. The term "packet discard time" is used in its plain and ordinary sense.

[3] Compounding the construction problem is the '431 patent specification's complete failure to describe the claimed inventions. *See* Cloudflare's Motion for Summary Judgment of Invalidity of the '431 Patent for lack of written description filed concurrently herewith (the "'431 MSJ").

In some contrast to many of the '431 patent claim terms, the '431 patent's specification does offer some guidance here. The specification provides:

> The packet discard time limit ("D") value 315 is used to ensure buffer availability within the switch 220. This value is a parameter that can operate like a burst tolerance that allows the switches 220 of the network 200 to have a basis for policing micro-flows. In one embodiment, the packet discard time can be between 10 ms and 500 ms.

'431 patent at 9:45-50. Under this disclosure, the "packet discard time" is a time parameter with a value in milliseconds. Sable's two constructions dodge definition of what a packet discard time *is* and instead attempt to define what the "packet discard time" allegedly *does*. This is unnecessary, as "packet discard time" is a term of art well known to a POSA and not re-defined in the '431 patent. Declaration of Paul S. Min, Ph.D. ("Min dec.") ¶¶ 38-42.

Sable's attempt to import extra information like "buffer" into the construction appears to be an attempt to bolster the inadequate written description of the '431 patent specification for these claims—the above-quoted passage is the only reference in the entire '431 patent specification to a "buffer" that is not discussing and criticizing prior art (as discussed in the '431 MSJ). Claim construction's purpose is to construe the meaning of claim terms. *E.g.*, *Phillips v. AWH Corp.*, 415 F.3d 1303, 1311, 1316 (Fed. Cir. 2005).

And moreover, at the same time as Sable is trying to read *in* extraneous disclosure to the meaning of a straightforward, well-known term of art, Sable is trying to read *out* the basic parameter of what the term is: a *time* parameter. There is no basis for doing so—a "packet discard time" is a time. No construction is needed of this well understood term. Min dec. ¶¶ 38-42.

5. Means for determining a capacity of a buffer containing a microflow based on a characteristic (10) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Indefinite As to the proper function, *see supra* construction of "based on a characteristic"	**Function:** determining a capacity of a buffer containing a microflow based on a characteristic. **Structure:** ingress micro-flow manager 505 (including the micro-flow recognizer 520 and micro-flow classifier 530), memory 550 (including the storage block table 560 and flow block table 570), linecard 410, and equivalents thereof. See cols. 13:11-14:46, and associated Figures.

The dispute between the parties is whether any structure exists in the '431 patent's specification corresponding to the claimed function of "determining a capacity of a buffer containing a microflow based on a characteristic [associated with the microflow]." *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351 (Fed. Cir. 2015) (*en banc*). The specification, which includes no description of the claim invention, not surprisingly identifies no structure corresponding to the claimed function. *See* '431 MSJ.

Sable's proposed function requires, *e.g.*, an act of "determining" a capacity of a buffer containing a microflow based on a characteristic. Sable's proposed structure includes an "ingress micro-flow manager 505," "micro-flow recognizer 520," "micro-flow classifier 530," "memory 550," "storage block table 560," "flow block table 570," or "linecard 410," but none of these independently or cooperatively are described in the specification as determining a capacity of a buffer containing a microflow based on a characteristic (of anything). The specification states that the "linecard 410"—which includes both the "micro-flow manager 505" and the "memory 550," '431 patent at 12:11-29—is "responsible for processing data packets received either from the trunk

lines or from the switch core 430," not for determining a capacity of a buffer. '431 patent at 11:10-65. Similarly, the specification teaches that "ingress micro-flow manager 505"—which includes "micro-flow recognizer 520" and "micro-flow classifier 530," '431 patent at 12:11-29—operates to "police the incoming data packets through packet discards," not to determine a capacity of a buffer. '431 patent at 16:36-37. Moreover, "memory 550"—which includes "storage block table 560" and "flow block table 570," '431 patent at 12:11-29—is never described as a buffer or as determining a capacity of a buffer. Accordingly, none of the referenced structures correspond to or perform what is claimed here. Min dec. ¶¶ 43-46.

Sable's proposed structure also references columns 13:11-14:46 of the specification and "associated Figures," but none of these provide any better evidence of corresponding structure. The specification says nothing about a "buffer," "a capacity of a buffer," or "determining a capacity of a buffer" in the context of describing an embodiment of inventions. None of the '431 patent's figures include a depiction of a buffer or the determining of a capacity of a buffer. *See* '431 patent 13:11-14:46 and patent figures; *and compare with* '919 patent Fig. 4B (showing "Buffers 408" in added disclosure in the '919 patent); Min dec. ¶¶ 43-46; *see also* '431 MSJ.

Because the patentee included no structure in the '431 patent specification corresponding to the function of "determining a capacity of a buffer containing a microflow based on a characteristic" this limitation is indefinite.[4] *E.g.*, *Williamson*, 792 F.3d at 1351.

[4] The same legal analysis is applicable to each of the means-plus-function clauses in the '431 patent as the '431 specification does not disclose the claimed inventions. *See* '431 MSJ. For the purposes of stream-lining the case for the Court, Cloudflare selected this clause as representative.

6. Weighting factor (16, 19-22, 25, 26) [Sable Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Factor indicating the portion of available rate bandwidth to be delegated to the micro-flow compared to other micro-flows	"the portion of an available rate a micro-flow is able to be delegated as compared to other micro-flows"

The dispute between the parties is whether a reason exists to depart from a previously agreed construction. Here again, Sable has changed its proposed construction from the construction Sable agreed to and proposed in the *Cisco* action. In that litigation, Sable proposed exactly the construction Cloudflare now proposes. Sable *Cisco* Brief at 18. The pertinent disclosure in the specification is as follows:

> The weighting factor ("W") value 320 for AR traffic indicates how much of a portion of an AR rate a micro-flow is able to be delegated as compared to other micro-flows.

'431 patent at 10:19-39.

Sable now changes its proposed construction, however, to "the portion of an available rate a micro-flow is able to be delegated as compared to other micro-flows." Sable's new proposed construction is incorrect, because it changes the manner in which the specification describes a weighting factor. That is, the specification says the weighting factor "value . . . indicates how much of a portion of an AR rate a micro-flow is able to be delegated as compared to other micro-flows," but Sable wants to change "how much of a portion" to simply "the portion." There is no basis for doing so. Accordingly, the Court should reject Sable's proposed construction, and should construe "weighting factor" as Sable agreed in the *Cisco* action, "factor indicating the portion of available rate bandwidth to be delegated to the micro-flow compared to other micro-flows."

7. A delay variation substructure configured to provide a buffer value to dampen jitter in a transmission of the microflow (19) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Indefinite	Term does not require construction; plain and ordinary meaning

The dispute between the parties is whether the "substructure" limitations in Claim 19 are means-plus-function clauses. If so, each of the "substructure" limitations are indefinite—the '431 patent specification provides no (and Sable identifies no) corresponding structure. The limitation "a delay variation substructure configured to provide a buffer value to dampen jitter in a transmission of the microflow" is a means-plus-function term (subject to 35 U.S.C. § 112 ¶ 6) that is indefinite for failure of the specification to provide corresponding structure.

Although the "substructure" limitations do not use the word "means" (and so there is a rebuttable presumption that 35 U.S.C. § 112 ¶ 6 does not apply), these claim terms fail to either "recite sufficiently definite structure" or "function without reciting sufficient structure for performing that function." *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348-49 (Fed. Cir. 2015). Particularly, this claim term uses the nonce word "substructure" as a generic placeholder for the term "means." *Williamson*, 792 F.3d at 1350. The term "substructure" (or "delay variation substructure") would not be understood by a POSA to have a sufficiently definite meaning as a name for structure. Min dec. ¶¶ 47-54; *see also Williamson*, 792 F.3d at 1348-49 ("What is important is that the term, as the name for structure, has a reasonably well understood meaning in the art.") (quoting *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)). One could not be more generic about the identification of structure than by labelling

it "substructure," save for simply calling it "structure."[5] Moreover, this generic placeholder in the claim is then modified by the functional language—"substructure configured to"—followed by a claimed function (here, "provide a buffer value to dampen jitter in a transmission of the microflow," or "dampen jitter in a transmission of the microflow") that is not modified by sufficient structure, material, or acts to achieve that function. Min dec. ¶¶ 47-54.

Accordingly "a delay variation substructure configured to provide a buffer value to dampen jitter in a transmission of the microflow" is properly construed as a means-plus-function term. The specification, however, does not set forth sufficient corresponding structure, and as a result this term is indefinite.

8. Wherein at least of the wherein the packet discard time substructure, the microflow timeout period substructure, the weighting factor substructure, and the delay variation substructure is used to determine a behavior of a microflow (22) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Indefinite	Term does not require construction; plain and ordinary meaning

The dispute between the parties is whether the language "wherein at least of the wherein the" should be given its "plain and ordinary meaning"—*i.e.*, as nonsense—or construed as indefinite. This claim term is facially defective and indefinite, due to material grammatical error(s). It is not possible to determine whether this language means (for example) "~~wherein at least of the~~

[5] As discussed above, Sable does not agree that the preamble of claim 19 is limiting, and so under Sable's view the preamble's recital of a "microflow classification structure comprising" would not be available to make this term any less generic. Even if "microflow classification structure" is considered, however (as Cloudflare contends), the outcome is the same, as a "delay variation substructure" within a "microflow classification structure" is similarly generic and would not be understood by a POSA to have a sufficiently definite meaning as a name for structure. Min dec. ¶ 54.

wherein the" or "wherein at least one of the ~~wherein the~~" listed "substructure[s]" is used to determine a behavior of a microflow. The claim scope varies significantly depending on how the words are edited. Because this is an error of basic patent draftsmanship, a POSA can offer no clarity as to what correction would be needed to bring the claim into definiteness. Min dec. ¶¶ 55-58. Imposing any such guessed-at meaning would require improperly rewriting the claim limitation. *E.g.*, *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1353 (Fed. Cir. 2009) ("courts cannot 'rewrite claims to correct material errors'" but "if the correction is not subject to reasonable debate to one of ordinary skill in the art, namely, through claim language and the specification, and the prosecution history does not suggest a different interpretation, then a court can correct an obvious typographical error"); *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1358 (Fed. Cir. 2003) ("Since we cannot know what correction is necessarily appropriate or how the claim should be interpreted, we must hold claim 13 of the '578 patent invalid for indefiniteness in its present form."). Accordingly, this claim term is indefinite.

9. The predetermined value for the microflow timeout period substructure comprises is less than 32 seconds (29) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Indefinite	Term does not require construction; plain and ordinary meaning

As with the preceding term, the dispute between the parties is whether the language "comprises is" should be given its "plain and ordinary meaning"—*i.e.*, as nonsense—or construed as indefinite. As with the preceding term, this claim term is facially defective and indefinite, due to a material grammatical error.

For the same reasons as explained above, "comprises is" does not convey the scope of the claim with reasonable certainty, because it is not possible to determine whether this language

means (for example) "the predetermined value for the microflow timeout period substructure comprises ~~is~~ less than 32 seconds," or "the predetermined value for the microflow timeout period substructure ~~comprises~~ is less than 32 seconds." Min dec. ¶¶ 59-62. Other claims of the '431 patent demonstrate both of these possibilities. *E.g.*, '431 patent at claim 25 ("weighting factor substructure *comprises* a value of zero") (emphasis added), claim 27 ("delay variation substructure *is* a time value less than 200 milliseconds") (emphasis added). The law is clear that courts cannot rewrite claim limitations in this situation. *E.g.*, *Ultimax*, 587 F.3d at 1353; *Novo Indus., L.P.*, 350 F.3d at 1358. Accordingly, this claim term is indefinite.

III. The '932 Patent

1. Flow state information (1, 9, 24, 32) [Sable Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Plain and ordinary meaning	a uniquely identifiable set of a data signals associated with a specific flow

The dispute between the parties is whether "flow state information" should be construed in accordance with its plain and ordinary meaning or whether Sable will be allowed to allege a construction to this Court contrary to its prior representations as to the scope of the term.

In three proceedings, Sable has offered three different definitions. In the *Cisco* action, Sable agreed that "flow state information" should be accorded its plain and ordinary meaning. Sable *Cisco* Brief at 18. Then, in the Cloudflare IPR challenging the validity of the '932 patent, Sable argued that "flow state information" requires "a set of quality of service (QoS) descriptors associated with each micro-flow." *See* '932 POPR at 1. Now, in the present action, Sable proposes the exact same term means "a uniquely identifiable set of a data signals associated with a specific flow." Sable's proposed construction in this case is not only inconsistent with its prior positions,

but also inconsistent with how the term is used in the '932 patent. Sable's proposed construction should thus be rejected, and the Court should apply the plain and ordinary meaning.

Setting aside the foregoing, "flow state information" is not used in any special way in the '932 patent. Declaration of Narasimha Reddy, Ph.D. ("Reddy dec.") at ¶¶ 33-40. For example, claim 1 recites "creating a flow block having flow state information for a received first data packet of a micro-flow."[6] '932 patent at 19:14-15. The words making up the term, "flow," "state," and "information," are common phrases well-known in the networking and communication fields, which require no construction. Reddy dec. at ¶ 40. For example, meaning should be given to the word "state" as "[t]he condition at a particular time of any of numerous elements of computing – a device, a communications channel, a network station, a program, a bit, or other element – used to report on or to control computer operations." Ex. 11, Microsoft Computer Dictionary, Fifth Edition at "state," "status." Sable's proposed construction does not include any such concept and is therefore erroneous.

The '932 patent specification uses "flow state information" in its ordinary sense without any special definition. Reddy dec. at ¶ 40. Like the claims discussed above, the specification states that the flow block has "flow state information for the micro flow." *See, e.g.*, '932 patent at Abstract. Throughout the '932 patent specification, the inventor described a flow block storing flow state information for a micro-flow. *See, e.g.*, '932 patent at 3:3-4:12 ("The switch includes an aggregate flow block, which includes tunnel specific information for a particular network tunnel, and a flow block that includes flow state information for a micro-flow."). Sable's

[6] Similarly, the other asserted independent claims recite a flow block having flow state information for a micro-flow. '932 Patent claim 9 ("a flow block having flow state information for a micro-flow"); claim 24 ("a flow block having flow state information for the micro-flow"); claim 32 "creating a flow block having flow state information for a received first data packet of a micro-flow").

construction is erroneous to the extent it seeks to connect "flow state information" to a "flow," and not a "micro-flow." At no point does the '932 patent provide a concrete definition of "flow state information" and instead provides general examples of "information." *See, e.g.*, *id.* at Abstract; 1:21-22; 2:10-13; 2:32-26; 3:7-9; 5:4-6 10:4-52; 12:25-29; 16:5-12; 17:26-32; *see also* Reddy dec. at ¶¶ 36-40.

The more significant issue with regard to this term is Sable's narrow construction of it in the '932 POPR:

> First, Petitioner fails to prove a reasonable likelihood that either of its combinations discloses or renders obvious a flow block containing "flow state information" for a micro-flow, as needed for every challenged claim. *The plain meaning of this claim language, as supported by the specification, confirms that the claimed "flow state information" requires a set of quality of service (QoS) descriptors associated with each micro-flow.*

See '932 POPR at 1 (emphasis added). There is a significant difference between the construction proposed by Sable in the IPR (including a requirement that "flow state information" include a "set of quality of service (QoS) descriptors associated with each micro-flow") and both constructions proposed by Sable to this Court. Sable is attempting to narrowly construe the term in the IPR to overcome prior art and advocate for a broader construction before this Court. In the event Sable succeeds in persuading the PTAB of its position and the Cloudflare IPR is not instituted on those grounds, then Sable should not receive the benefit of a different construction in present action.[7]

[7] Notably, the PTAB should issue its decision of whether to institute the IPR on or before December 7, 2021; *i.e.*, three months after Sable filed its September 7, 2021 POPR. *See* 35 U.S.C. § 314(b) ("Timing.—The Director shall determine whether to institute an inter partes review under this chapter pursuant to a petition filed under section 311 within 3 months after—(1) receiving a preliminary response to the petition under section 313. . . .").

The Court should construe this term in accordance with its plain and ordinary meaning, or, in the alternative, hold Sable to the construction it proposed in the '932 POPR. Reddy dec. at ¶ 40.

2. Micro-flow (1, 24, 32) [Sable Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Plain and ordinary meaning	Uniquely identifiable set of data signals that typically have the same open system interconnection model network layer and transport layer characteristics

The dispute between the parties with regard to "micro-flow" is addressed above in Section II.2. Sable is proposing an identical construction of "microflow" and "micro-flow" for the '431 Patent, '932 Patent, and '919 Patent. As noted above, Sable's proposed construction of "microflow" in this case is different from that explicitly relied upon by Sable in the '431 POPR and '919 POPR. Sable did not rely upon an explicit definition of "micro-flow" in the '932 Patent, but contrary to its position in this case, did advocate that QoS information necessarily be included in a microflow: "The plain meaning of this claim language, as supported by the specification, confirms that the claimed 'flow state information' requires a set of quality of service (QoS) descriptors associated with each micro-flow." '932 POPR at 1; *see also id.* at 16-17 (discussing the "QoS field" of the first packet of the micro-flow). Sable's current construction includes no reference to QoS. Given the alignment of the claim construction standards in district court cases and IPR proceedings, there is no legitimate reason for Sable's different proposed constructions. Pending the resolution of the IPR institutions, Sable should not be allowed to put forth a different construction than offered in its POPRs.

3. Tunnel identifier (1, 32) [Sable Term] & Aggregate flow block (1, 6, 9, 10, 24, 25, 26, 29, 32) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Tunnel identifier: A Label Switched Path (LSP) identifier that identifies a particular LSP to use when transmitting the data packet across the network domain	Identifier that identifies a network tunnel
Aggregate flow block: A data structure containing Label Switched Path (LSP) information in conjunction with micro-flow block information and indexed using the tunnel identifier	Term does not require construction; plain and ordinary meaning

The dispute between the parties is whether the terms "tunnel identifier" and "aggregate flow block" (also referred to as an "AFB") should be construed in the manner the terms are used consistently throughout the specification (as proposed by Cloudflare). *See, e.g., Bell Atl. Network Servs., Inc. v. Covad Commc'ns Grp., Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001) ("[A] claim term may be clearly redefined without an explicit statement of redefinition . . . . In other words, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents." (citations omitted) (internal quotation marks omitted)); *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004) ("[T]erms may be redefined away from their ordinary meaning by their consistent use in the specification"). The terms "aggregate flow block" and "tunnel identifier" may be taken up together as each is closely related in the '932 patent, and the construction of "aggregate flow block" informs the proper construction of "tunnel identifier."

The term "aggregate flow block" is not a term of art; therefore, the specification must be consulted in order to discern its scope. Reddy dec. at ¶ 43; *see 3M Innovative Properties Co. v. Tredegar Corp.*, 725 F.3d 1315, 1321 (Fed. Cir. 2013). Various aspects of an "aggregate flow

block" are discussed throughout the specification, but the term is used consistently in the context of MPLS networks. *See* '932 patent at 1:31-2:62; Reddy dec. at ¶¶ 41-43. The patentee explicitly connects "aggregate flow blocks" with MPLS networks in the "Summary of the Invention": "Embodiments of the present invention fills these needs by providing a network tunneling system that maintains flow state information for various QoS characteristics by utilizing *aggregate flow blocks, which maintain LSP information, in conjunction with micro-flow block information*." '932 patent at 3:3-7. As also discussed in Section IV.3, the patentee's reference to "LSP information" is a reference to an MPLS network. Reddy dec. at ¶ 42.

The explicit connection of an "aggregate flow block" to LSPs of an MPLS network continues through the specification. *See, e.g.,* '932 patent at 3:61-4:2 (describing information contained in an AFB including information related to "LSP utilization," "LSP statistics collection," "LSP alteration," and "LSP teardown"); 5:4-9 ("LSP information"); 7:19-21 ("LSP"); Figures 1A, 2A, 2C, 3, 4, 6, 8, 9, 10 (each including reference to MPLS, LSP, and/or AFBs); 10:24-11:61 (describing use of LSPids with AFBs); 12:35-13:9 (describing use of LSPids with AFBs); 17:25-46 (describing use of LSPids with AFBs). The advantage of the invention is explicitly described in the context of "aggregate flow blocks" and LSPs: "Advantageously, the AFBs of the embodiments of present invention provide the ability to combine micro-flow flow state information with LSP utilization, allowing LSP statistics collection, LSP alteration, and LSP teardown without introducing prohibitively time consuming and processor intensive tasks to the network system." '932 patent at 13:27-32; *see also id*. at 13:33-63 (describing more benefits of using an "LSP AFB").

A core characteristic of an "aggregate flow block" is that it is indexed by a "tunnel identifier." This relationship is found in many of the claims and throughout the specification. *See*,

e.g., '932 patent at 3:14-15 ("An aggregate flow block is indexed using the tunnel identifier"); 3:40-41 ("An aggregate flow block is indexed using the tunnel identifier"); claim 1 ("indexing an aggregate flow block using the tunnel identifier"); claim 17 ("indexing an aggregate flow block using the tunnel identifier"). In each and every description of the preferred embodiment, the tunnel identifier and value by which the AFB is indexed or found is an "LSPid." *See* '932 patent at 10:52-11:36 (describing LSPids); 12:35-45 (describing LSPids); 16:37-62 (describing LSPids); 17:15-46 (describing LSPids). This confirms that the patentee intended to use the terms "aggregate flow block" and "tunnel identifier" in the context of MPLS. Reddy dec. at ¶¶ 41-45. Sable's proposed construction only requires the "tunnel identifier" to identify a network tunnel, but the specification makes clear that the claimed invention considers the tunnel identifier an "A Label Switched Path (LSP) identifier that identifies a particular LSP to use when transmitting the data packet across the network domain."

The Court should construe "aggregate flow block" and "tunnel identifier" in the manner used by the patentee to mean "a data structure containing Label Switched Path (LSP) information in conjunction with micro-flow block information and indexed using the tunnel identifier" and "a Label Switched Path (LSP) identifier that identifies a particular LSP to use when transmitting the data packet across the network domain," respectively.

4. Preamble (9, 24) [CF Term]

Defendants' Proposed Construction	Sable's Proposed Construction
The preambles of claims 9 and 24 are limiting	The preambles of claims 9 and 24 are not limiting

The dispute between the parties is whether the preambles of claims 9 and 24 limit the scope of each claim to a "router" (as proposed by Defendants) or not (as urged by Sable). "In general, a preamble limits the invention if it recites essential structure or steps, or if it is 'necessary to give

life, meaning, and vitality' to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). Here, the preambles of claims 9 and 24 are limiting as the term "router" provides essential structure to the claim limitations.

9. **A router** capable of network tunneling utilizing flow state information, comprising:	24. **A router** capable of network tunneling utilizing flow state information, comprising:
an aggregate flow block having tunnel specific information for a particular network tunnel; and	an ingress linecard having logic that selects a particular network tunnel for a received micro-flow, the ingress linecard further including logic that selects a particular egress linecard and a particular port to utilize for transmission of the micro-flow;
a flow block having flow state information for a microflow,	an aggregate flow block having tunnel specific information for the selected network tunnel, the aggregate flow block further including statistics for the selected network tunnel; and
the flow block further including an identifier that associates the flow block with the aggregate flow block, wherein the aggregate flow block stores statistics for the particular network tunnel.	a flow block having flow state information for the micro-flow, the flow block further including an identifier that associates the flow block with the aggregate flow block.

Claims 9 and 24 each recite a "router . . . comprising" a number of components. The claim drafters did not choose to claim a "system," "device," or "method" comprising the claimed invention. Instead, in claim 9, the claim drafters chose to claim "a router . . . comprising" "a flow block" and "an aggregate flow block" that "stores statistics for a particular network tunnel." Without the "router," untethered data structures are all that is claimed. Similarly, in claim 24, the claim drafter chose to claim "a router . . . comprising" "an ingress linecard," "an aggregate flow block," and a "flow block." Without the "router," the line card and associated data structures could be anywhere. Each claims recites a "router" in order to identify where the limitations in the body of the claim

are located. Without the router in the preambles, the claims fail to recite a sufficiently complete invention capable of performing the claimed invention and is not "capable of network tunneling utilizing flow state information." *See, e.g.*, '932 Patent Col. 5:22-26; *see also* Col. 3:20-23. ("In another embodiment, a switch that is capable of providing network tunneling utilizing flow state information is disclosed."). Each preamble also recites the term "flow state information" which is then used again in the body of the claims. The preambles are limiting.

IV. The '919 Patent

1. Aggregate flow (25, 26) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
A flow comprising a plurality of individual data flows that share a Label Switched Path (LSP)	Term does not require construction; plain and ordinary meaning

The dispute between the parties is whether "aggregate flow" should be construed in accordance with its use in the specification or not construed. Because the term "aggregate flow" is not a term of art, it should be construed in accordance with its clear and consistent use in specification as "a flow comprising a plurality of individual data flows that share a Label Switched Path (LSP)." Min dec. ¶¶ 63-72.

The language of claim 25 requires "a first aggregate flow comprising a plurality of individual data flows." An "aggregate flow," in context, indicates a plurality of individual data flows being considered as a whole or a unit. Ex. 12, Webster's New World Dictionary at "aggregate"; Ex. 13, Merriam-Webster's Collegiate Dictionary at *id.*; Min dec. ¶¶ 67. There must, then, be something that makes the plurality of individual data flows into an "aggregate" flow. The '919 specification teaches that this "something" is the LSP—the label switched path. That is, it is the sharing of an LSP that makes a plurality of individual flows into an aggregate flow.

The invention of the '919 patent ("Micro-Flow Label Switching") is plainly directed to an LSP-based network. The abstract, for example, provides:

> An invention is provided for affording an aggregate micro-flow having intelligent load balancing. Initially, a set of label switched paths (LSPs) is defined for a network domain. Then, as the network receives a set of data packets, a micro-flow comprising the set of data packets is defined. In addition to the information included in each received data packet, the micro-flow includes a quality of service (QoS) type. A particular label switched path (LSP) is selected from the defined set of LSPs, based on the QoS type of the micro-flow, and the micro-flow is transmitted along the selected LSP.

'919 patent at Abstract. The law is clear that consistent use of a phrase (even without explicit definition) can provide meaning to a term. *E.g.*, *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1301-02 (Fed. Cir. 2004). Each time "aggregate flow" is used in the patent it is in the context of an LSP. Figures 1A and 1B each show "aggregate flow[s]" as flows that share an LSP:

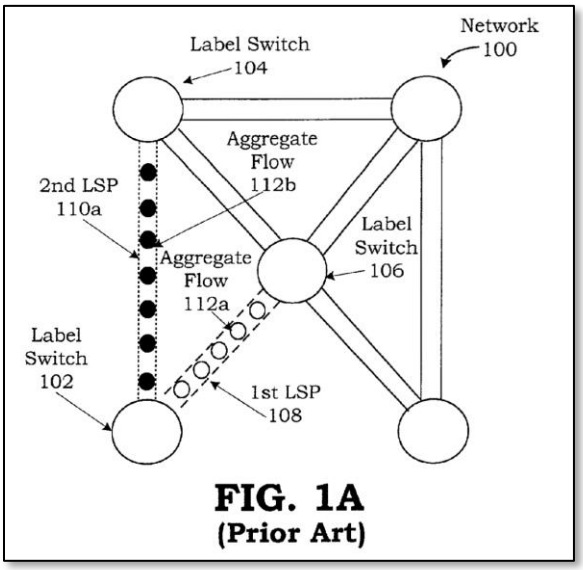


FIG. 1A
(Prior Art)

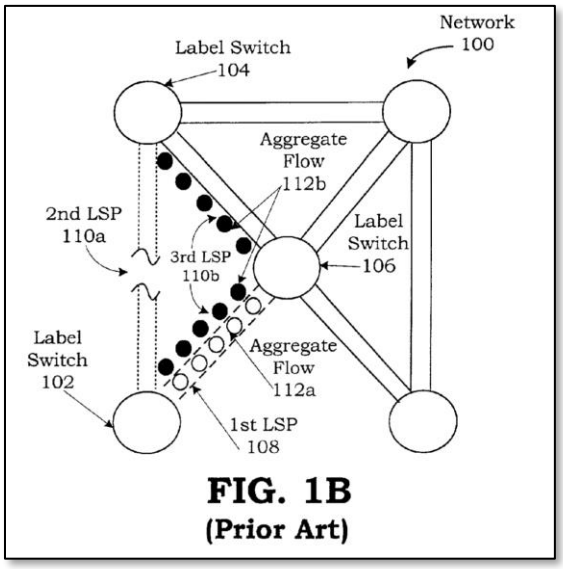


FIG. 1B
(Prior Art)

'919 patent at Figs. 1A, 1B. The specification further explains, for example, that "each LSP includes a large aggregate flow" and discusses the "aggregate flows [] of each LSP" and "the aggregate flow [] included in the second LSP," always in the context of a "conventional LSP based network." '919 patent at 2:61-3:28. These disclosures (representing substantially all the disclosure

in the '919 patent addressing what an "aggregate flow" is) repeatedly reflect that an "aggregate flow" is "a flow comprising a plurality of individual data flows that share a Label Switched Path (LSP)." *Irdeto Access*, 383 F.3d at 1301-02.

2. Micro-flow (25, 27) [Sable Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Plain and ordinary meaning	Uniquely identifiable set of data signals that typically have the same open system interconnection model network layer and transport layer characteristics

The dispute between the parties with regard to "micro-flow" is addressed above in Section II.2. Sable relied upon the following construction of "micro-flow" in the '919 POPR: "a group of data packets from a single transmission wherein each data packet in an individual micro-flow includes the same source address, destination address, source port, destination port, and protocol type, and *is assigned a quality of service (QoS) value*." '919 POPR at 1-2 (emphasis added). There is no legitimate reason for Sable to depart from this proposed construction in this case.

3. Label switched path(s) (26, 27) [Sable Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
An MPLS Layer 2 Label Switched Path (LSP) to transport one or more traffic flows over a predetermined path	A predetermined path for the transport of one or more traffic flows or packets

The dispute between the parties is whether the term "label switched path(s)" is specific to MPLS networks (as urged by Cloudflare) or a generic term contemplating neither labels nor switches (as proposed by Sable). The '919 patent uses the term "label switched path" is its plain and ordinary sense to refer to a path in an MPLS (Multiprotocol Label Switching) network:

> The basic function of MPLS is to provide a Layer 2 Label Switched Path (LSP), which is similar to ATM, to transport one or more traffic flows over a predetermined path.

'919 patent at 1:62-64. Cloudflare's proposed construction is consistent with and based on this disclosure: "label switched path" should be construed to mean "an MPLS Layer 2 Label Switched Path (LSP) to transport one or more traffic flows over a predetermined path."

Sable's construction erroneously excises both "label" and "switched" from the meaning of the term—such that under Sable's construction a "label switched path" would include paths that include neither labels nor switches as long as the path is predetermined. Such a construction is not consistent with the '919 patent (which does not disclose any such "label switched path" not having MPLS layer 2 label switching to transport one or more traffic flows over a predetermined patch). Sable is effectively asking the Court to construe "label switched path"—in a patent that is titled "Micro-Flow Label Switching"—to not necessarily include either labels or switches, an unwarranted departure from the specification and the plain and ordinary meaning of the term. The Court should construe "label switched path" as "an MPLS Layer 2 Label Switched Path (LSP) to transport one or more traffic flows over a predetermined path."

V. The '593 Patent

1. "Undesirable behavior" (1-5, 9, 25, 29) & "Badness factor" (9, 29) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Indefinite	Terms do not require construction; plain and ordinary meaning

The terms "undesirable behavior" and "badness factor," one or more of which is found in each asserted claim of the '593 patent, are indefinite. Both terms fail, "when read in light of the specification and the prosecution history . . . to inform, with reasonable certainty, those skilled in

the art about the scope of the invention." *Interval Licensing, LLC v. AOL, Inc.*, 766 F.3d 1364, 1369-1370 (Fed. Cir. 2014). Both are subject to the vagaries of a person's opinion. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005). Neither "undesirable behavior" nor "badness factor" is a term of art nor objectively bounded by the specification. In fact, unbounded scope appears to be the point: "Overall, for purposes of the present invention, the badness factor may be computed in *any desired* way, using *any desired* methodology and *any desired* criteria." '593 patent at 8:37-40 (emphasis added); *see also id*. at 7:52-54 (same).

Standing alone, the terms "undesirable behavior" and "badness factor" are highly subjective. *See Interval Licensing*, 766 F.3d at 1371. Neither is a term of art. Reddy dec. at ¶¶ 47-48. Both terms connote subjective notions of degree. Whether something is undesirable or bad is typically a matter of opinion. Ex. 13, Merriam-Webster's Collegiate Dictionary at "bad," "desirable," "undesirable"; Ex 14, The Merriam-Webster Dictionary at "bad," "desirable," "undesirable." In other words, what may have been undesirable or bad for Caspian (Sable's predecessor-in-interest), may not be for Cloudflare and vice versa. Reddy dec. at ¶ 57. Neither word provides any objective standard. Reddy dec. at ¶¶ 47-48, 57. The terms "undesirable behavior" and "badness factor" are akin to similar terms found indefinite by the Federal Circuit such as "aesthetically pleasing" (*Datamize*, 417 F.3d at 1356), "fragile gel" (*Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1256 (Fed. Cir. 2008)), "unobtrusive manner" (*Interval Licensing*, 766 F.3d at 1374), and "QoS requirements" (*Intellectual Ventures I LLC v. T-Mobile USA, Inc.*, 902 F.3d 1372, 1381 (Fed. Cir. 2018)).

The context in which "undesirable behavior" and "badness factor" are used in the claims fails to provide any meaningful limit in scope. Claims 1-3 require determining "whether said flow exhibits undesirable behavior" by comparing at least one of the flow's behavioral statistics "to at

least one pre-determined threshold value." '593 patent at 10:41-44, 64-67. Requiring the comparison of two numbers to determine undesirability does little to provide a discernable, certain scope—what the numbers are remains open-ended. Reddy dec. at ¶ 48. Claims 4, 5, and 25 require "determining, based at least partially upon the set of behavioral statistics, whether the flow is exhibiting undesirable behavior." '593 patent at 11:31-33, 46-48. And, claims 9 and 29 require "computing, based at least partially upon the set of behavioral statistics, a badness factor for the flow, wherein the badness factor provides an indication of whether the flow is exhibiting undesirable behavior." '593 patent at 12:5-8; 13:41-44. Claims 4, 5, 9, 25, and 29 identify some of the factors to be considered in determining whether a flow is exhibiting undesirable behavior or computing a badness factor, but leave the exact scope open-ended by way of the "at least partially" language. Reddy dec. at ¶ 49. Given the subjectivity of the terms (even in the context of the claims), a person of ordinary skill in the art would not know, based on the claim language, the scope of the claims. Reddy dec. at ¶¶ 47-49.

A patents' specification may save an otherwise indefinite term by providing some objective standard to measure the scope of the invention. *Datamize*, 417 F.3d at 1351. But, nothing in the '593 patent's specification provides objective bounds to the terms "undesirable behavior" or "badness factor." For "undesirable behavior" and how it might be determined, the specification provides no better guidance than the above-noted, open-ended language used in the claims. '593 patent at Abstract, Fig. 3, 1:53-2:52. The specification states that the determination of whether a flow is exhibiting "undesirable behavior" can be based (at least partially) on behavioral statistics of the flow or by the computing of a "badness factor." *See id.*; Reddy dec. at ¶ 50. Whether a flow is exhibiting "undesirable behavior" is only *partially* based on behavioral statistics. No limit is placed on what else may be considered. Reddy dec. at ¶¶ 50, 52.

The '593 patent provides exemplary descriptions of how to calculate a "badness factor" in Figure 5 and at col. 7:51-col. 8:40. But, *the specification does not limit the calculation of a "badness factor" to the described methodology*. Instead, the specification makes clear that a "badness factor" may literally be calculated in any conceivable manner. '593 patent at 7:52-54 ("For purposes of the present invention, the badness factor may be computed using any desired methodology based upon any desired criteria"); 8:37-40 ("Overall, for purposes of the present invention, the badness factor may be computed in any desired way, using any desired methodology and any desired criteria"). Thus, the specification's identification of an exemplary manner of computing a badness factor (and the use of it to identify undesirable behavior) does not save the patent as the patent makes clear it is non-limiting.

Likewise, the patent's discussion of identifying and penalizing "misbehaving" or "abusive" flows does not provide any objective standard for determining the scope of the claims. Reddy dec. at ¶¶ 53-57. The '593 patent is plainly directed at identifying and penalizing peer-to-peer (P2P) traffic. *See, e.g.*, '593 patent at 1:46-49 ("Overall, P2P protocols have gotten quite sophisticated, and the more sophisticated they become, the more difficult it is to identify P2P traffic. Unless P2P traffic can be identified, it cannot be effectively controlled."). The '593 patent states that "most of the bandwidth on the Internet is being consumed by just a minority of users." *Id*. at 1:14-15. The patent identifies P2P traffic as "abusive/misbehaving traffic that should be controlled and penalized." *Id*. at 1:16-18. But, again, the patent purports to broaden its scope beyond P2P traffic and its characteristics: "This mechanism may be applied to any type of network traffic including, but certainly not limited to, P2P traffic." *Id*. at 1:56-58. Nowhere does the patent provide limits on what may be considered "misbehaving" or "abusive" traffic. Reddy dec. at ¶¶ 53-57.

The highly subjective, unbounded scope of the term "undesirable behavior" and "badness factor" are compounded by Sable's proposal to not construe the terms at all. Essentially, Sable is asking the Court to allow it to prove up infringement no matter what methodology is used by Defendants, fully embracing the patent's "any desired way, using any desired methodology and any desired criteria" breadth. The terms "undesirable behavior" and "badness factor" are indefinite, and Defendants' respectfully request the invalidation of the asserted claims of the '593 patent.

2. Based at least partially upon the set of behavioral statistics (4, 5, 9, 25, 29) [CF Term]

Cloudflare's Proposed Construction	Sable's Proposed Construction
Based at least partially upon the set of behavioral statistics, but not any statistics associated with another flow	Term does not require construction; plain and ordinary meaning

The dispute between the parties is whether the clear and unequivocal disclaimer made during prosecution will be given effect. Cloudflare's proposed construction requires, based on explicit characterizations of the inventions by the patentee, that no information related to any flow but the particular one under consideration may be considered in making the relevant determinations or computations. Sable urges a plain and ordinary meaning construction that would allow the asserted claims to recapture claim scope given up to secure issuance of the claim.

Argument-based prosecution history estoppel and disclaimer only arise when the patentee makes "a clear and unmistakable surrender of subject matter." *Deering Precision Instrs., LLC v. Vector Distr. Sys, Inc.*, 347 F.3d 1314, 1326 (Fed. Cir. 2003); *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). Such estoppel and disclaimer occurs in the '593 patent's prosecution history. During prosecution, the examiner rejected the claims in view of

United States Patent No. 6,310,881 ("Zikan"). The patentee distinguished Zikan from the claimed inventions in a clear and unmistakable manner:

- The claimed invention "is a method for processing a *single* flow, whereby *only the statistics and behavior of that one flow are used to determine its outcome* [Natchu, para 30-31]." Ex. 15, 5/21/2009 Response to Office Action at 4.

- "Thus, the Zikan reference teaches multiple nodes that acquire information from multiple sources and make changes to groups of flows, whereas the present invention is directed to a method for *processing one flow at a time based on information from only that one flow*," 5/21/2009 Response to Office Action at 4-5.

- "Additionally, statistics for each flow processed by a router are separate and distinct, and the *statistics for one flow are not used to determine the outcome of another flow*." [Natchu, para 29-30; FIGs. 3-4]" 5/21/2009 Response to Office Action at 5.

- "Thus, in the Zikan reference, the method used to optimize traffic flow in a communication system incorporates information from several flows, whereas *the method in the present application utilizes information from a single flow*." 5/21/2009 Response to Office Action at 6.

- "Therefore, while the system in Zikan collects information during a predetermined time period and compares it with information from another time period, the method of the present invention *collects information for a single flow, without time limits, and does not compare it to statistics for another flow*." 5/21/2009 Response to Office Action at 6.

The patentee applied these arguments across all pending claims. And, after another rejection based on Zikan, the patentee re-urged the same arguments. *See* Ex. 16, 4/13/2010 Response to Office Action at 12-17. Defendants' proposed construction simply requires that the patentee's explicit statements be given meaning. *Deering Precision*, 347 F.3d at 1326; *Omega Engineering*, 334 F.3d at 1323.

The plain language of the claim is not sufficient because of the "at least partially language." For example, the plain language of the claim would cover a system in which the statistics and behavior of the particular flow are considered ("based at least partially on") along with data concerning the behavior of *other flows in the network*. Yet, the patentee repeatedly claimed during prosecution that his invention does not consider information concerning other flows in making the

relevant analysis. *See* 5/21/2009 Response to Office Action at 4-6; 4/13/2010 Response to Office Action at 12-17. Because the patentee's statements are clear and unequivocal, the phrase "based at least partially upon the set of behavioral statistics" should be construed to mean "based at least partially upon the set of behavioral statistics, but not any statistics associated with another flow."

CONCLUSION

For the foregoing reasons, the Court should adopt Cloudflare's proposed constructions.

Dated: November 12, 2021

Respectfully submitted,

/s/ Christopher T. Bovenkamp

STEVEN CALLAHAN
Texas State Bar No. 24053122
scallahan@ccrglaw.com
CHRISTOPHER T. BOVENKAMP
Texas State Bar No. 24006877
cbovenkamp@ccrglaw.com
ANTHONY M. GARZA
Texas State Bar No. 24050644
agarza@ccrglaw.com
C. LUKE NELSON
Texas State Bar No. 24051107
lnelson@ccrglaw.com
JOHN HEUTON
jheuton@ccrglaw.com
CHARHON CALLAHAN ROBSON & GARZA, PLLC
3333 Lee Parkway, Suite 460
Dallas, Texas 75219
Telephone: (214) 521-6400
Telecopier: (214) 764-8392

Counsel for Defendant Cloudflare, Inc.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing document has been served on all counsel of record via ECF on November 12, 2021.

/s/ C. Luke Nelson